



**All narration notes in this briefing were not meant to be read verbatim but rather used as a speaker guideline.**

(Introduction)

Thank you for attending tonight's meeting.

# Meeting Goals



- Provide summary information on the Draft Engineering Analysis and Draft Supplemental Environmental Impact Statement (EIS) for Reaches 2 and 3
- Solicit public comments

The Corps recently published a draft Supplemental Environmental Impact Statement (SEIS) – the reason it's a supplemental is that back in 2000 we prepared the first EIS, covering the whole dike. We did this to help us determine costs or impacts of repairing the dike to bring it back to its original design standards.

At the end of the briefing, we'll open the floor to questions and comments.

A lot of different concepts have to be taken into consideration, but I'll walk you through the history and where we are today.

# History



- 1926 & 1928 hurricanes – Lake Okeechobee overflows
- Congress tasks Corps to build first dike
- 1948 approval of C&SF Project and longer, taller dike
- 1962 Herbert Hoover Dike dedication



Following the catastrophic hurricane floods of 1926 and 1928, the state of Florida asked Congress to provide authorization or direction to the Corps to build the Herbert Hoover Dike – that's how our process works. Congress authorizes and funds all our projects.

The dike is authorized and designed for a standard project flood which is expected once every thousand years or so.

# History



- 1990s Corps study finds weak areas in HHD
- 2000 Congress approves Corps proposal for fix; analysis and design begins
- 2005 Corps starts construction

In the 90s we studied the dike's condition and put out a report in 1999 telling everyone that there are sections of the dike that are piping or eroding and are susceptible to failure. We laid out the consequences if we don't do anything.

# History



- 2005 Hurricane Katrina
- Governor Bush requests independent assessment of HHD integrity
- Corps overhauls procedures for managing dams and levees (ongoing)
- Corps halts HHD construction
- Corps independent team evaluates HHD design
- Corps sponsors HHD repair evaluation with state and independent experts
- Consensus reached on modified concept for fix

Until Hurricane Katrina in 2005, concern about dike failure was relatively low. What happened in NO changed public perception nationally and around the world, and raised the level of awareness and concern.

The Corps began evaluating all the levees across the nation. We started to re-evaluate our own design.

Then the state also an independent review of the HHD. The state called for an independent report and we provided them with the 1999 report which showed that at a certain water level, dike failure was imminent.

Rehab construction began in December 2005 - the contractor started to have problems with constructing the cut-off wall in Reach 1. We halted construction and began evaluating the design based on lessons learned from Katrina and input from the state's independent report.

Corps sponsored a conference where national and state engineering experts came to consensus on the HHD conceptual design.

# Recent Developments



- Lake Okeechobee Regulation Schedule Study
  - Lands for temporary storage initiative
- HHD rehabilitation
  - Reach 1
    - Toe ditch clearing begins this month in right of way
    - Seepage berm construction begins this summer
    - Cut-off wall testing begins this fall
  - Reach 2 & 3
    - Major Rehabilitation Report supplement

At a high water level, Lake Okeechobee poses a serious threat to the dike and to the communities surrounding it. We recently developed a plan – or regulation schedule - to keep the lake at safer water levels than the current plan would have allowed except through reactive deviations. This plan will be implemented in July 2007. Immediately following implementation, water managers will start developing a new regulation schedule that will take into account construction of Comprehensive Everglades Restoration Plan projects. The projects will provide many additional options for water storage and management. The new regulation schedule is currently planned for 2010 implementation. There will be another 45-day public comment period and we'll be back here to talk to you about it during a public meeting April.

Toe ditch clearing began in the right of way this month and it will be a continuing process as we move around the Lake.

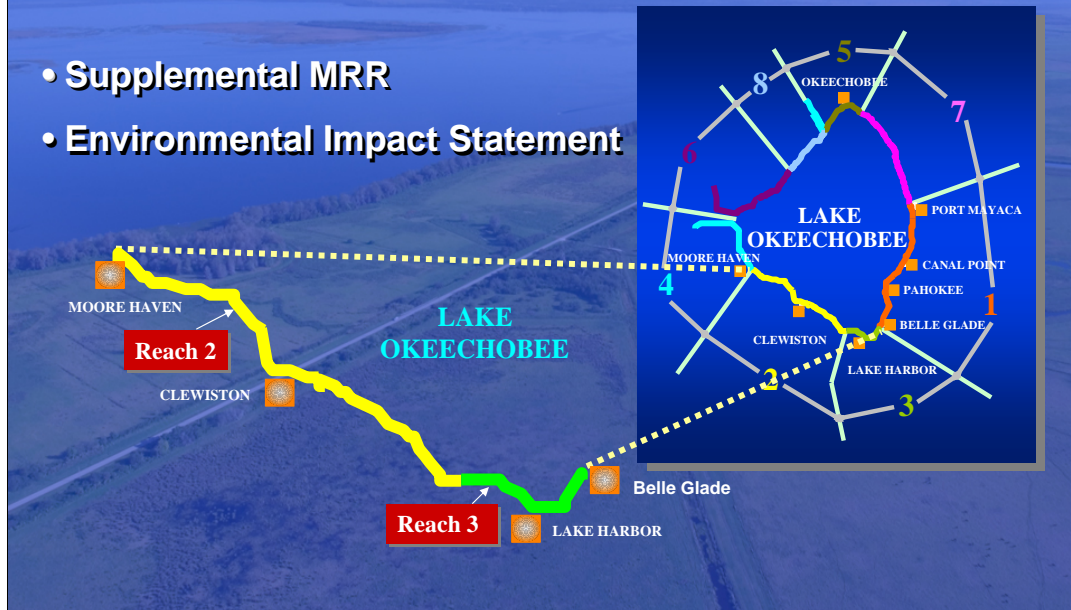
Construction of the seepage berm will start around May timeframe in existing right of way. Construction of balance will start when additional real estate is acquired.

Construction testing of the redesigned Cutoff Wall in Reach 1 will commence this fall.

# HHD Rehabilitation Reaches 2 & 3



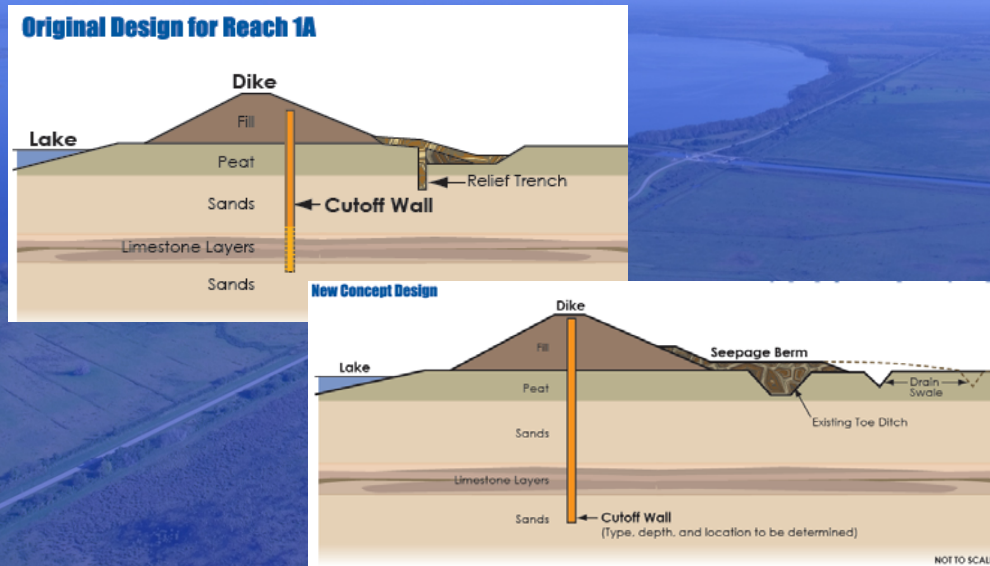
- Supplemental MRR
- Environmental Impact Statement



Reaches 2 & 3 run from Moorehaven to Belle Glade.

(Intro to Pauline for original and new design.)

# Original and New Design



The 1999 Major Rehabilitation Report approved by Congress in 2000 proposed a design very similar to this new concept design.

A 2001 value engineering study recommended a design change to reduce the real estate cost and minimize the footprint. (design change 1)

Emergency repairs to the dike conducted in 2003-2004 in the toe ditch in Reach 1 to stop boils, led to another design modification. (dc 2)

At the end of 2005, the Corps awarded a construction contract for Reach 1A – the design is the original shown here.

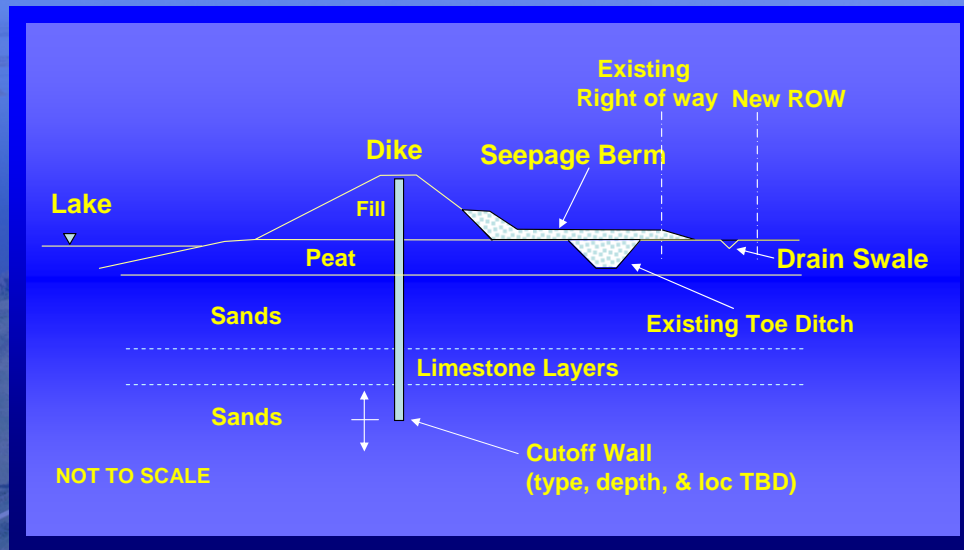
Following Hurricane Katrina and the published Interagency Performance Evaluation Task Force report on the New Orleans levees, the SFWMD joined the Corps to conduct an independent technical review on the HHD.

The interagency team of scientific and engineering experts reached consensus on this conceptual design which mirrors the 1999 design. The team recommended eliminating the real estate constraint.

# Conceptual Design



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This is the conceptual design recommended in the SEIS report. There are three features – a toe ditch, a seepage berm and a cut-off wall.

The 150 feet from the toe of the dike measurement came about as an estimate to provide the SFWMD with additional property that might be needed for the seepage berm.

This estimate is situation-dependent on the geology and structural features around the dike. In some areas we won't need 150 feet due to the geology and in other areas, we may need a little more.

We want to minimize adverse impacts as much as we can, but we also have to make it safe.

This slide also shows the general geology of reaches 2 and 3. Below the dike is peat, fine sand, limestone with shell beds and sand. Underlying these porous layers, there are a series of formations with lower permeability that act as a confining layer which is about 300 feet below ground.

The bottom of the cutoff wall we're recommending is between elevation -20 to -40 feet, which is up in the sand layer.

## **National Environmental Policy Act Activities**

- Provided draft SEIS to Federal, State and local agencies, Native American Tribes, private organizations, and interested parties
- Notice of Availability of Draft SEIS published in the Federal Register Dec 22, 2006
- **45-day public comment period on Draft SEIS ends Feb 5, 2007**

Copies of the draft SEIS were mailed to public libraries in the project area and have been posted electronically for web viewing on our website.

The SEIS explains in detail what we want to do, specifically in the right of way in Reaches 2&3. The right of way (ROW) is property that we and/or our sponsors, the South Florida Water Management District, own. We can begin some work in these ROW areas quickly.

The SEIS is based on the Supplemental Major Rehabilitation Report, which shows our design changes from the original 2000 plan to today's conceptual plan.

This SEIS allows for work within our existing ROW. We'll publish another document that will address areas outside the ROW and up to an additional 150 feet from the dike toe – this will include impacts to roadways, railroad tracks and structures.

We're working on identifying that now – detailed engineering based on the conceptual design to determine what the footprint will be.

# Draft SEIS Summary of Impacts

## *Environmental Factor*

### Hydrology

Extensive partial cut-off wall could affect local groundwater table in vicinity of HDD. This could mean a lower groundwater table due to impeded groundwater flow from the recharge source, i.e., the lake. Most of the impact expected to be in the area of the new seepage berm.

Section 4 of the Draft SEIS report addresses the environmental impacts.

Implementation of the recommended plan would have no impact or minimal impact to the environment, except for impacts to hydrology, vegetation, fish and wildlife, and recreation.

Some minor reduction of groundwater flows can be accommodated by increased releases through outlet structures.

The deeper we make the wall, the more impact there is to groundwater. (Confining layer)

The deeper the wall, the less need there is for more property for the seepage berm.

We won't know what data to analyze until we settle on the cutoff wall depths.

We'll do modeling this spring to analyze what those cut-off wall impacts are to groundwater, both locally and regionally.

## Draft SEIS Summary of Impacts

### *Environmental Factor*

Vegetation	Filling in toe ditch would eliminate wetland plant communities
Fish & Wildlife	Habitat provided by toe ditch would be eliminated
Recreation	Impacts to park access, bank fishing, bike trail, access to select lakeside locations, and to Lake O Scenic Trail

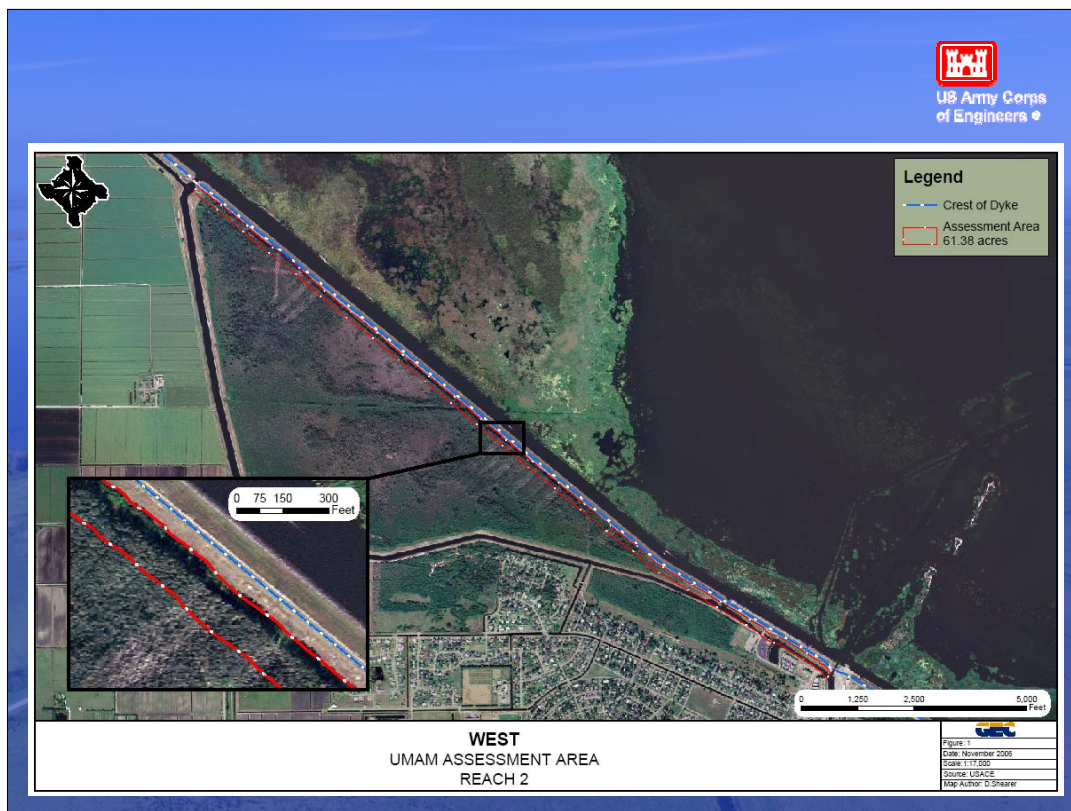
Implementation of the recommended plan would affect low quality vegetation in the toe-ditch canal. However, most of the plants found within these areas are exotic and invasive species – loss would not be objectionable.

Fish and wildlife impacts would be minimum. Toe ditch fill would eliminate habitats for small fish, reptiles, invertebrates, etc.

Impacts to recreation would be temporary due to construction in these areas. Following construction, access to the trail would be restored. We will include the cost to restore the LOST in the final MRR.

We do not anticipate there would be any long-term adverse socio-economic impacts from implementing the recommended plan.

We do expect that construction will generate beneficial economic impacts for the region because most construction employment would be filled by local residents.



Again, the 150 feet from the toe of the dike measurement came about as an estimate to provide the SFWMD with additional property that might be needed for the seepage berm.

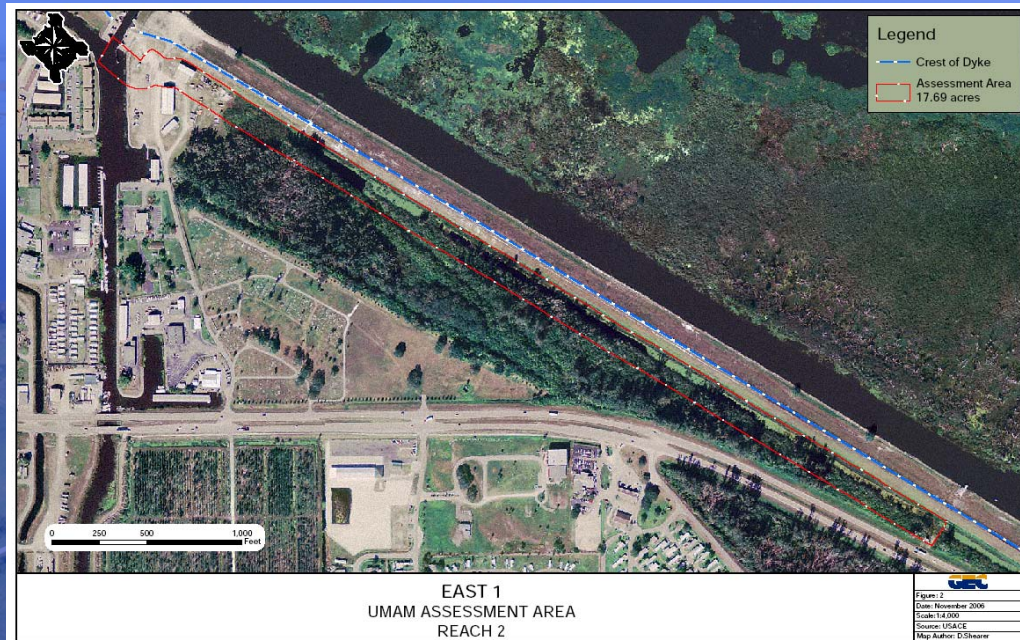
The estimate is situation-dependent on the geology and structural features around the dike.

Our goal is to avoid or minimize impact to homes or structures as much as possible. Public safety is our highest priority and strengthening the dike paramount to public safety.

We will do whatever we can to avoid adversely impacting Pahokee and other communities around the dike.



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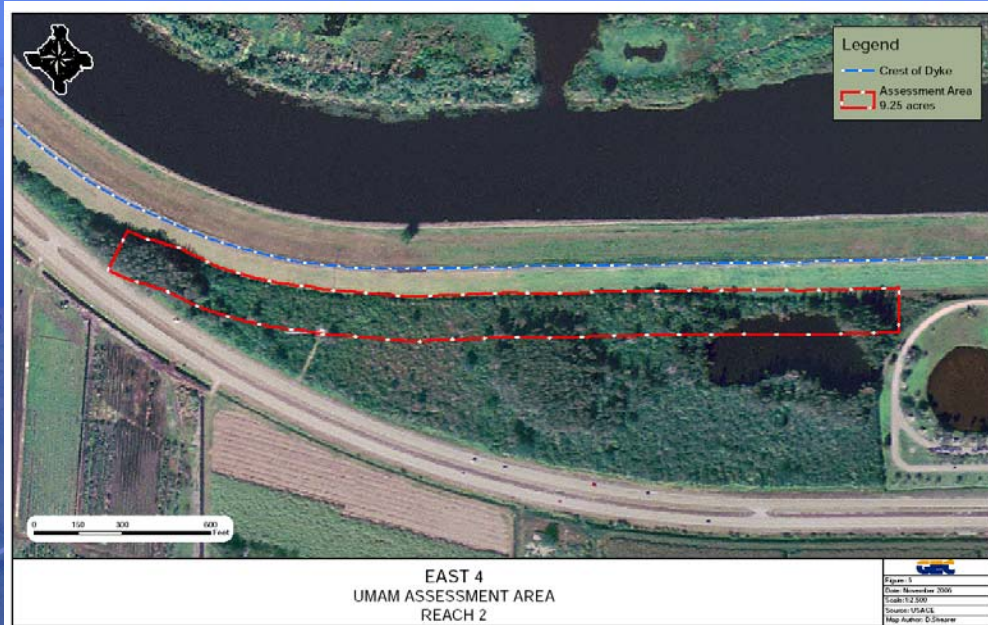


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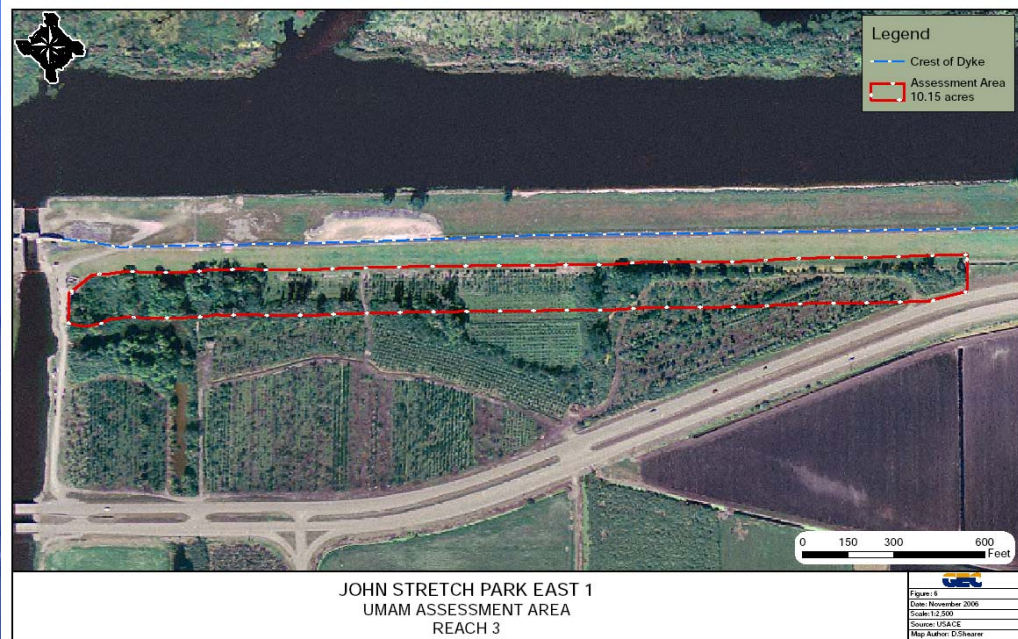


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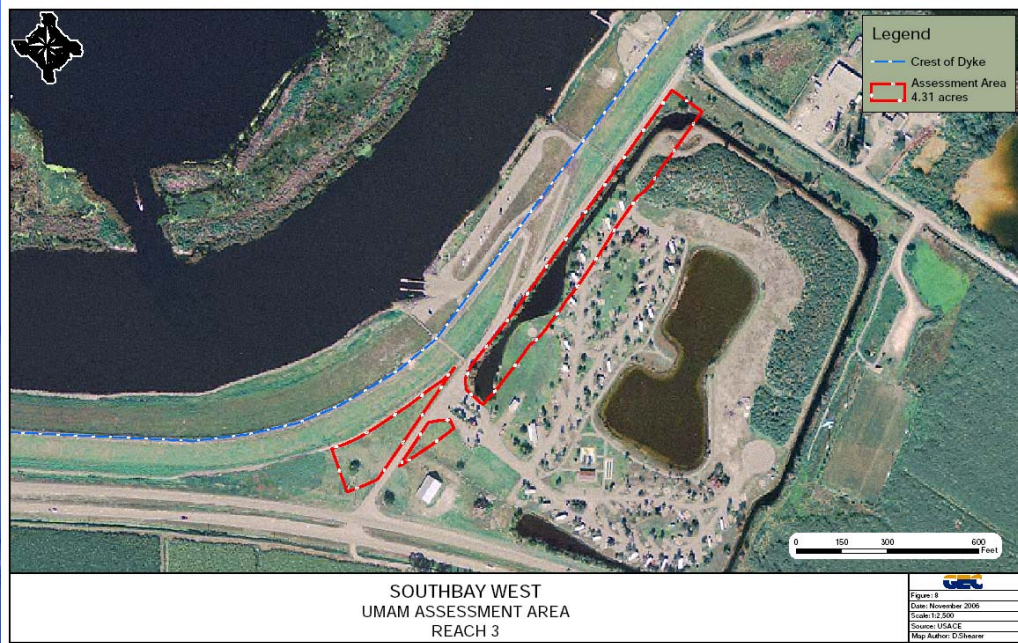


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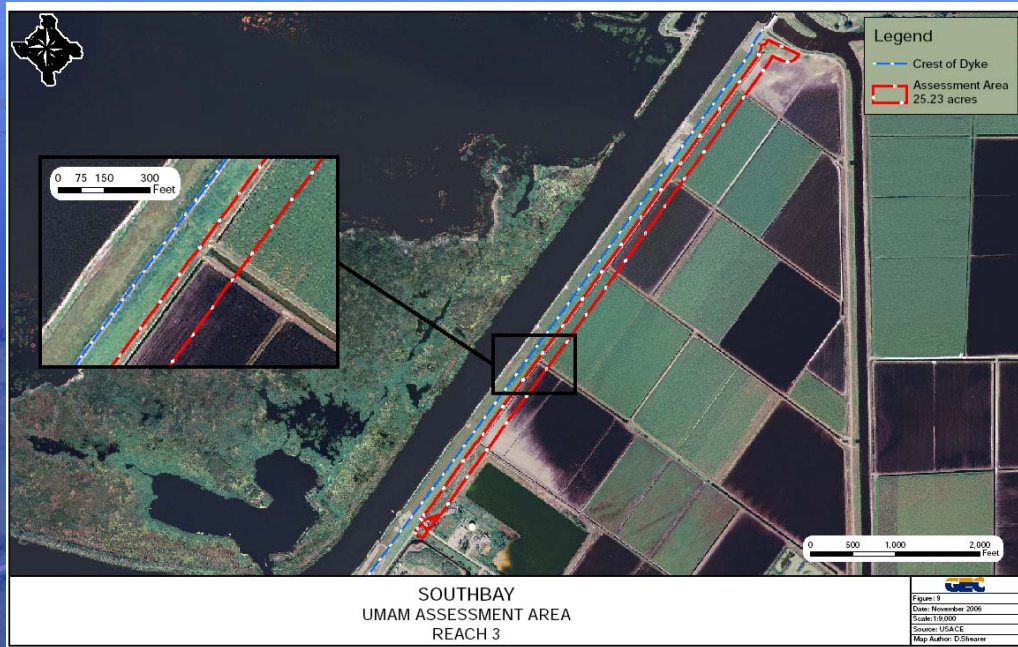


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## What's Next?



- Public and agency review of the draft SEIS
  - Dec 22, 2006 - Feb 5, 2007
- Respond to comments and prepare final SEIS
  - Feb 5 - Feb 25, 2007
- Public and agency review of the final SEIS
  - Mar 5 – Apr 4, 2007
- Washington level review
- Record of Decision signed in Washington
  - 31 May, 2007

Here's the schedule for reaches 2 and 3.

The comments you provide us will be addressed in the SEIS.

We will host the next public meeting in March to brief you on the design footprint.

# Public Comments



**Website: [www.saj.usace.army.mil](http://www.saj.usace.army.mil)**

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Your comments are important to us.

We also have comment cards in the back of the room if you didn't pick one up on the way into the meeting.



Open to questions.